Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for selective sintering ~~and consolidating of~~ a powder, the method comprising: ~~the steps of:~~

spreading a layer of a powder blend on a platform, said powder blend comprising:

a base metal of titanium or alloy thereof, the base metal having a first melting temperature, and

an alloying metal having a second melting temperature lower than said first melting temperature,

wherein the base metal and alloying metal are selected, and quantitatively included in the powder blend, based on a characteristic of the base metal to dissolve in but not react with the alloying metal when the alloying metal is liquefied at an annealing temperature between the first and second melting temperatures, and wherein said powder blend does not include a carbon-based polymer;

directing an energy beam onto a localized portion ~~selected areas~~ of the layer of the powder blend and thereby melting said alloying metal in the localized portion; and

re-solidifying said alloying metal by withdrawing said energy beam from said powder blend layer, and thereby binding said base metal or alloy thereof with said alloying metal in a metallic mixture in the localized portion, wherein a green part is formed;

thereafter brushing off excess powder from the green part; [[and]]

heating the green part ~~metallic mixture~~ at a temperature sufficient to melt said alloying metal and dissolve the base metal therein to form a hyper-eutectic liquid composition; and

after the hyper-eutectic liquid composition is formed, cooling the hyper-eutectic liquid composition to form a sintered part.

2. (Original) The method according to claim 1, wherein said alloying metal comprises elemental tin.

3. (Original) The method according to claim 2, wherein said tin is included in said powder at a concentration ranging between about 5 wt.% and about 15 wt.%.

4. (Currently Amended) The method according to claim 2, wherein said step of directing an energy beam heats ~~said selected areas of said powder blend~~ the localized portion to a temperature less than about 1700 °F.

5. (Currently Amended) The method according to claim 2, wherein said step of directing an energy beam heats ~~said selected areas of said powder blend~~ the localized portion to about 449 °F.

6. (Previously Presented) The method according to claim 1, wherein said alloying metal comprises a Ti-Cu-Ni alloy at a concentration ranging between about 10 wt.% and about 30 wt.% of the powder blend, said Ti-Cu-Ni alloy being about 15 wt.% Ni and about 15 wt.% Cu, with the balance being Ti.

7. (Currently Amended) The method according to claim 6, wherein said step of directing an energy beam heats ~~said selected areas of said powder blend~~ the localized portion to about 1700 °F.

8. (Canceled)

9. (Currently Amended) A method for fabricating a metal part, comprising the steps of:

spreading a spread layer of a powder blend, said powder blend comprising:

a base metal of titanium or alloy thereof, and

an alloying metal having a lower melting temperature than that of said base metal, wherein said powder blend does not include a carbon-based polymer;

melting selected areas of said alloying metal by directing an energy beam onto a localized portion ~~selected areas of said~~ of the spread layer~~; of the powder blend;~~

re-solidifying said alloying metal, ~~metal into a solid layer~~ thereby binding said base metal or alloy thereof with said alloying metal in the localized portion, wherein a green part layer is formed;

spreading a next layer of powder blend on top of the green part layer; ~~solid layer~~;

building up a ~~preform of the metal~~ green part by iteratively performing said steps of melting, re-solidifying, and spreading; ~~spreading of a next layer so as to form additional stacked solid layers;~~

after completion of the green part, brushing off excess powder from the green part;

heating the ~~preform~~ green part at a temperature sufficient to melt said alloying metal and dissolve the base metal therein to form a hyper-eutectic liquid composition; and

continuing to heat the hyper-eutectic liquid composition until [[it]] the hyper-eutectic liquid composition solidifies into a sintered part.

10. (Original) The method according to claim 9, wherein said alloying metal comprises elemental tin.

11. (Original) The method according to claim 10, wherein said tin is included in said powder at a concentration ranging between about 5 wt.% and about 15 wt.%.

12. (Currently Amended) The method according to claim 11, wherein ~~said step of~~ directing an energy beam heats the localized portion ~~said selected areas of said powder blend~~ to a temperature less than about 1700 °F.

13. (Currently Amended) The method according to claim 11, wherein ~~said step of~~ directing an energy beam heats the localized portion ~~said selected areas of said powder blend~~ to about 449 °F.

14. (Previously Presented) The method according to claim 9, wherein said alloying metal comprises a Ti-Cu-Ni alloy at a concentration ranging between about 10 wt.% and about 30 wt.% of the powder blend, said Ti-Cu-Ni alloy being about 15 wt.% Ni and about 15 wt.% Cu, with the balance being Ti.

15. (Currently Amended) The method according to claim 14, wherein ~~said step of~~ directing an energy beam heats the localized portion ~~said selected areas of said powder blend~~ to about 1700 °F.

16. (Canceled)

17. (Original) The method according to claim 9, wherein each of said powder blend layer is between about 0.010 inch and 0.002 inch in thickness.

18. (Currently Amended) The method according to claim 9, further comprising:

cooling the sintered part;

thereafter pressurizing the sintered part in an isostatic press to cause the sintered part to have a substantially homogenous structure and to be densified.

~~performing a hot isostatic pressure process on said metal part after performing said metal liquid phase sintering and isothermal solidification process, and thereby causing said metal part to have a substantially homogenous structure.~~

19. (Currently Amended) The method according to claim 18, wherein ~~said hot~~ the isostatic pressure process is performed at about 1800 °F in an inert environment at about 1500 psi.

20.-24. (Canceled)

25. (New) The method of claim 1 further comprising:

thereafter pressurizing the sintered part in an isostatic press to cause the sintered part to have a substantially homogenous structure and to be densified.

26. (New) The method of claim 1 wherein the green part comprises a structure having at least one of a cavity and a channel.

27. (New) The method of claim 1 wherein both the green part and the sintered part comprise a structure having at least one of a cavity and a channel.

28. (New) The method of claim 9 wherein the green part comprises a structure having at least one of a cavity and a channel.

29. (New) The method of claim 9 wherein both the green part and the sintered part comprise a structure having at least one of a cavity and a channel.